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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,153	12/15/2003	Donald James Milligan	200308989-1	2070

22879 7590 09/02/2008

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EXAMINER

NGUYEN, LINH THI

ART UNIT	PAPER NUMBER
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2627

NOTIFICATION DATE	DELIVERY MODE
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09/02/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/734,153	Applicant(s) MILLIGAN ET AL.	
	Examiner LINH T. NGUYEN	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 10-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-20 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,21-24,26 and 27 is/are rejected.
- 7) ☒ Claim(s) 5, 13, 14, and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 6-8, 10-12, 21, 22, 24, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al (US Patent Number 5574279) in view of Gimzewski et al (US Patent number 4668865) and further in view of Kurihara et al (US Patent Number 5390161).

In regards to claims 1 and 21, Ikeda et al discloses an electrostatic actuator and method for a contact probe storage device (Fig. 3B) comprising: a first electrode (Fig. 3A, element 3); a second electrode (Fig. 3A, element 7) supported in a predetermined spaced essentially parallel relationship with the first electrode (Fig. 3A-B, 7 is parallel with 3) by resilient members (Fig. 3, element 8); and a probe (Fig. 3 element 12) configured to engage a medium in which data indicative topographical features are formed (Column 4, lines 41-45), the probe being mounted on the second electrode so as to extend away from the first electrode (Fig. 3A-B, element 7 space apart 4 from the first electrode 3), wherein only one of the first and second electrodes is configured to have a voltage selectively applied thereto to attract the first and second electrodes toward one another and move the probe away from the medium (Column 4, lines 56-67). However, Kurihara et al does not disclose wherein a heater disposed on the second electrodes.

In the same field of endeavor, Kurihara et al discloses wherein a heater disposed on the second electrodes (Fig. 5, element 6). At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the electrostatic actuator of Ikeda et al to have a heater as suggested by Kurihara et al. The motivation for doing so would have been to generate heat for reading/writing on a medium. However, Ikeda et al and Kurihara do not disclose the second electrode is supported by a plurality of flexible extension members.

In the same field of endeavor, Gimzewski et al discloses the second electrode is supported (Fig. 5, element 21 can also be used as electrode since it is a conductive element) by a plurality of flexible extension members (Figs. 2 and 3, the extension members 2, 5, 6, and 8). At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the actuator of Ikeda et al and Kurihara et al to have a plurality of flexible extension members as suggested by Gimzewski et al. The motivation for doing so would have been to increase the resonance frequency (Column 2, lines 6-10).

In regards to claims 2 and 22, Ikeda and Kurihara et al do not but Gimzewski et al discloses wherein a capacitance varies with the displacement of the probe with respect to the medium (Column 6, lines 40-52). The motivation is the same as claim 1 above.

In regards to claims 4 and 24, Ikeda and Kurihara et al do not but Gimzewski et al discloses an electrostatic actuator, wherein a first pair of the flexible extensions are configured to apply a voltage to the second electrode (Fig. 2, either flexible 8 or 11 applied

voltage of + or -). The motivation is the same as claim 1 above.

In regards to claims 6 and 26, Ikeda and Kurihara et al do not but Gimzewski et al discloses an electrostatic actuator as set forth in claim 3, wherein the flexible extension members are made of an electrically conductive material (Column 4, lines 52-55). The motivation is the same as claim 1 above.

In regards to claims 7 and 27, Ikeda and Kurihara et al do not but Gimzewski et al discloses an electrostatic actuator and method, wherein the flexible extension members each have an electrically conductive portion (Column 4, lines 52-55). The motivation is the same as claim 1 above.

In regards to claim 8, Ikeda et al discloses an electrostatic actuator arrangement for a contact probe storage device comprising: a probe (Fig. 11, element 54) configured to engage a medium in which data indicative topographical features are formed (It is inherent that marks will be in formed in form of bits on the medium); and linear acting electrostatic motor means for selectively drawing the probe out of engagement with the medium (Fig. 11, in z direction; Column 9, lines 8-40). However, Ikeda et al and Kurihara et al do not but Gimzewski discloses the flexible support means for supporting the linear acting electrostatic motor (Figs. 2-3). The motivation is the same as claim 1 above.

In regards to claim 10, Ikeda et al discloses an electrostatic actuator, wherein a first electrode; and a second electrode supported in a predetermined spaced essentially parallel relationship with the first electrode (Fig. 3A-B) and the linear acting electrostatic motor means (column 9, lines 8-40). Ikeda et al and Kurihara et al do not but Gimzewski et al discloses an actuator comprises of the capacitor means (Column 6, lines 40-52). The motivation is the same as claim 1 above.

In regards to claims 11 and 23, Ikeda and Kurihara et al do not but Gimzewski et al discloses an electrostatic actuator, wherein the second electrode is supported by a plurality of flexible extension members (Fig. 3). The motivation is the same as claim 1 above.

In regards to claim 12, Ikeda et al discloses an electrostatic actuator arrangement, wherein the flexible support means further comprise means for establishing an electrical connection with the second electrode (Fig. 3). The motivation is the same as claim 1 above.

Allowable Subject Matter

Claims 15-20 allowed. Applicant has amended to include allowable subject matter of claim 17 as previous indicated allowable.

Claims 5, 13, 14, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for allowance is the same in the previous non-final action.

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH T. NGUYEN whose telephone number is (571)272-5513. The examiner can normally be reached on 10:00am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

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supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TAN Xuan DINH/
Primary Examiner, Art Unit 2627
August 27, 2008

/L.N/
August 26, 2008